The net result of the model may be thought of as a rate selected from a cell in a three-dimensional matrix like that shown in Exhibit A-2. In the simple form of the model, the number of subscribers, the number of plant miles, and the number of satellite services carried determine which rate norm is appropriate for a particular basic or expanded basic service tier for a particular community. The model could also be used with a larger set of local determining factors.

The model allocates overall costs to particular tiers of service. A flow diagram of the cost allocation approach appears in Exhibit A-3. To facilitate the determination and allocation of cost norms, operating costs are broadly classed into categories commonly used in the industry:

- Programming
- Technical (or Operations or Plant)
- Marketing
- General and Administrative

Exhibit A-2

ILLUSTRATION OF THREE-DIMENSIONAL TABLE OF BASIC RATES

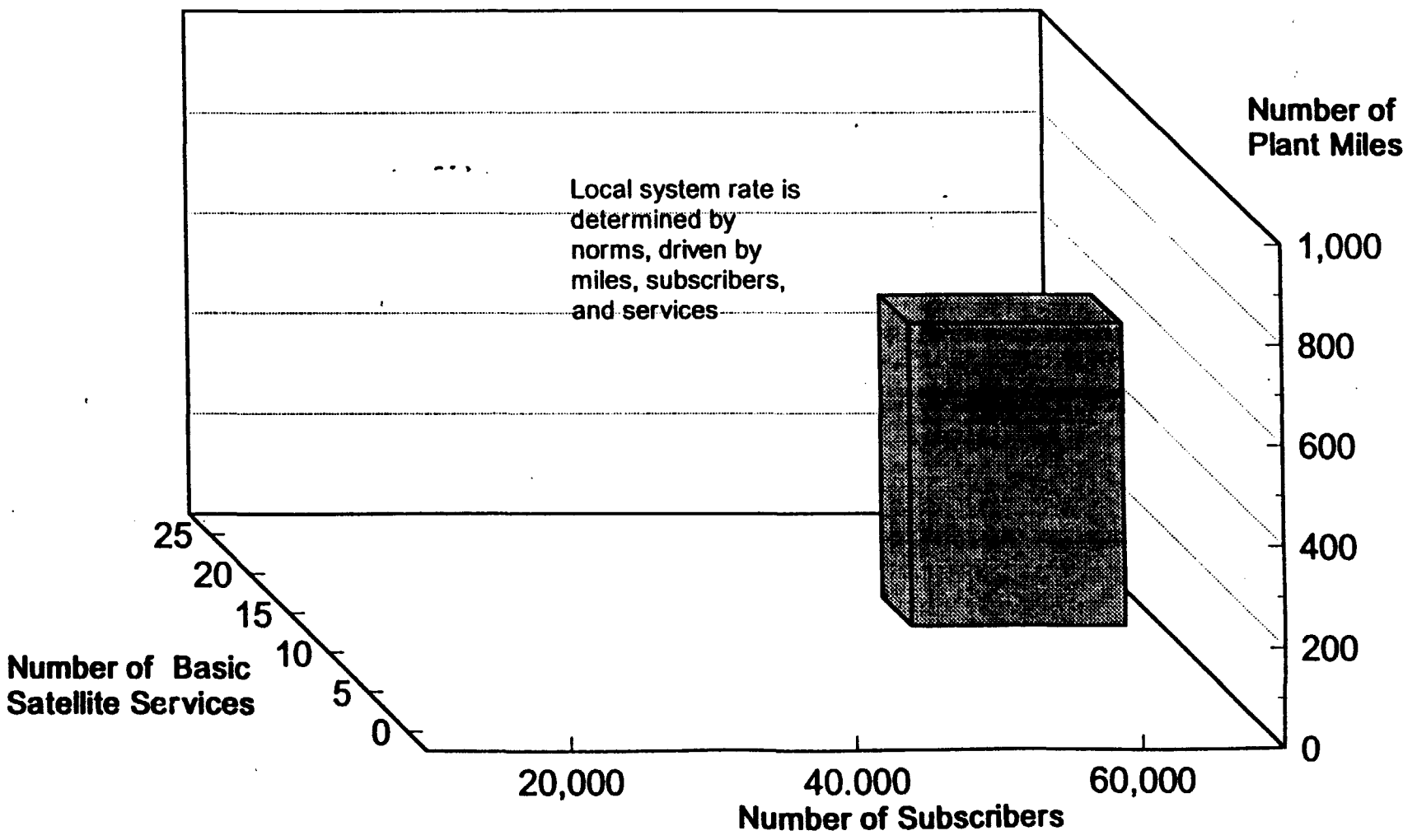
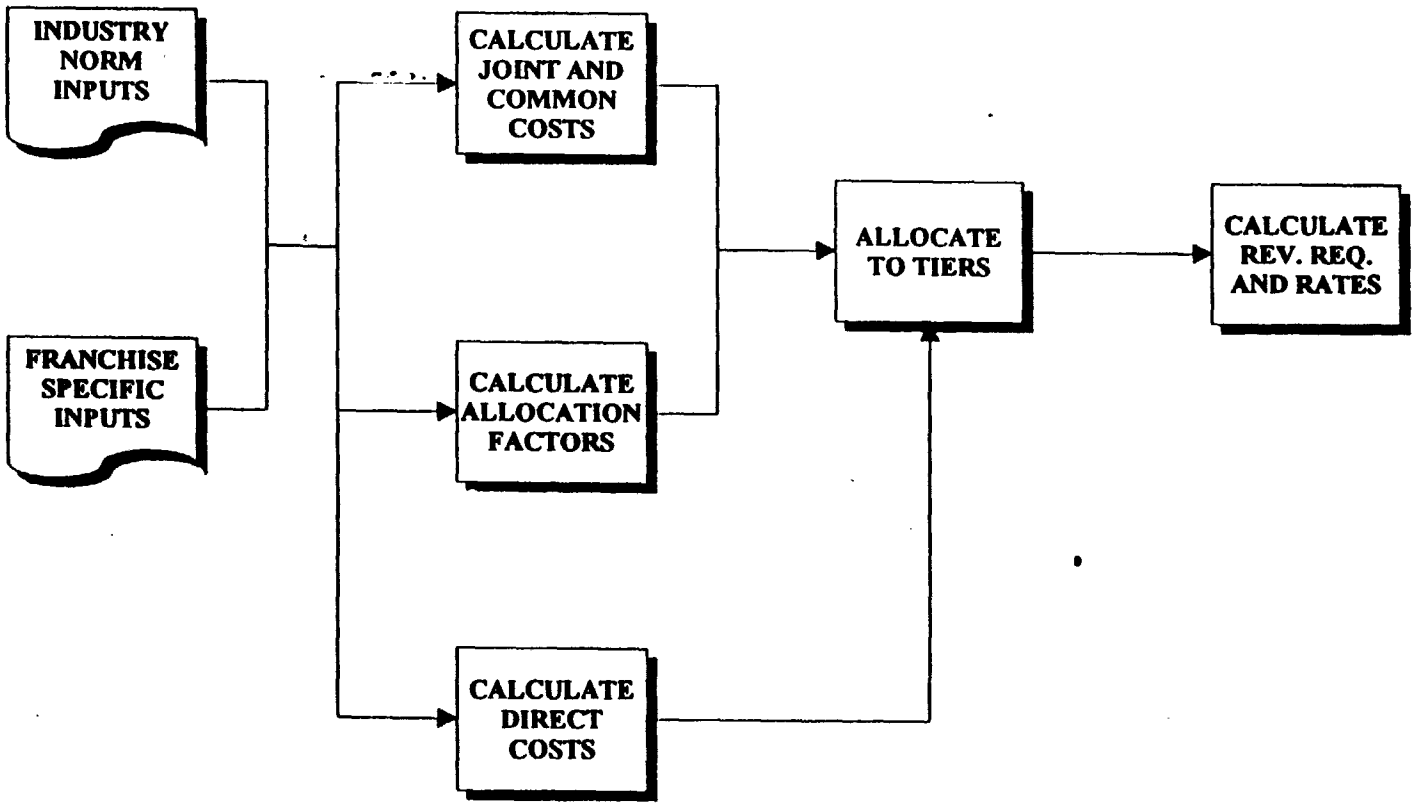


EXHIBIT A-3

OVERVIEW OF COST ALLOCATION FLOW



Within these categories the costs are further classified into categories that permit them to be reasonably aggregated and allocated:

- Variable per plant mile
- Variable per subscriber
- Variable as a percent of revenue
- Fixed[1]

Capital expenditures are also classified into variable and fixed categories.[2] Construction costs vary per mile. Thus the model will pick up costs as plant may be extended from year to year. Other costs, such as the headend, are relatively fixed, based on the type of system. Subscriber equipment costs, such as converters, and capitalized connection costs are not included in the capital expenditure based because the model assumes that these costs will be recovered through separate charges for equipment sales or rentals, and service installations.

Capital expenditures would normally be based on current replacement cost in order to simulate current entry of a competitor. The model also includes an allowance for annual replacement capital expenditures to maintain the system. The advantage of using replacement levels is that it helps assure that revenue requirements keep pace with technology -- the capital expenditure norms may be updated annually to help assure that industry returns are sufficient to build

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We propose that the "fixed" operating cost norms be treated in a step function fashion, depending on the outcome of the Commission's analysis of the data it collects. For instance, a limited number of broad subscriber size categories (e.g., 0 - 5,000; 5,001 - 20,000; 20,001 - 100,000; etc.) could be created, a specific fixed costs assigned to programming, technical, marketing, and general and administrative for each category. The appropriate figures can be determined through an analysis of residuals in each category after the variable and total category costs have been determined.

[2] Similar to the fixed operating costs, we see both variable and fixed capital costs being assigned to a system type categories, so that the appropriate benchmark amounts may be selected for each system. Here the categories may be determined by factors such as urban/rural, the total plant miles, the megahertz capacity of the system, the percentage of fiber in the plant, addressability, and interactive capability. Again, we will leave the selection to the results of the Commission's data analysis, but we believe the number of such categories should be limited to maintain an approach that is simple to administer.

modern systems. The disadvantage of using the replacement cost level is that it may overstate actual investment made in some systems, particularly ones that have not been maintained or upgraded, and therefore provide the operator higher returns than might be provided using system specific historical data. Thus the capital expenditures used in the model could be based on actual historical costs for exception/appeal cases.[3]

A weighted average cost of capital approach is applied to determine an appropriate return on the capital investment.

Revenue requirements are allocated to service tiers through the following procedures:

- Costs that are directly assignable to a specific tier are directly assigned. Generally these will be only programming costs.

- Other costs are classified on one of the following bases: per plant mile, per subscriber, revenue variable, or fixed.

- The plant mile variable costs, capital replacement costs and the allowable return on capital investment are distributed between basic services, expanded basic services, and pay services based on the percentage of channel capacity used by each group.

- All other joint and common costs are allocated based on subscriber percentages. The subscriber count for pay services is determined by the number of customers taking at least one pay service.

- Off-setting non-subscriber revenues are directly assigned to tiers where possible, and if they are derived from more than one tier they are distributed based on relative subscriber counts.

- A partial revenue requirement is calculated for each service tier, based on the costs allocated to this point in the procedure. Then the appropriate revenue variable percentages are applied to each tier to determine the total revenue requirement for each respective tier.

The total annual revenue requirement for each tier, divided by twelve months, divided by the average number of tier subscribers, yields the rate.

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[3] Alternatively, one could use the cost norms to develop the cost per channel that would apply if the replacement system were built (since the normative cost will imply a certain channel capacity). If applied to systems that have significantly lower channel capacity than the norm, this approach would encourage system upgrades.

Appendix A

3. Administration of the Model

As we envision the process, the Commission will have the following responsibilities to administer the model:

- Collect cost data through an annual survey of a sample of cable systems
- Establish initial norms
- Distribute a simple form that localities could use to apply the final model
- Update the cost norms as appropriate

The Commission's principal task in 1993 will be to develop the initial benchmark norms. For this initial round we suggest that the Commission collect data for a number of local specific cost factors (as documented in this appendix) and analyze how much of the variability in average costs may be explained with and without these factors. The Commission should also assess certain external factors that may affect costs, such as the television market category for each system analyzed. Based on the results of this initial analysis the Commission may empirically determine which cost and other variable are most appropriate to apply to in the future. For example, it may be that only a few local variables are needed (such as the number of subscribers and plant miles), and that national norms may be applied for all other factors. Or, the Commission may find that various local specific factors are required to give the model sufficient power to reasonably project costs. After concluding this analysis the Commission may develop a form that shows what data is to be filled in using national norms, and what requires local information.

Making the model available on a microcomputer spreadsheet to local authorities, although not necessary, would likely simplify the process and reduce the possibility for errors. However, the Commission could merely develop simple manual tables for use by jurisdictions.

Appendix A

4. Model Detail

The proposed cost-of-service benchmark model appears in Exhibit A-4.[4] The model consists of five sections:

- Model Inputs
- Allocation Factors
- Joint and Common Cost Pool
- Tier Allocations
- Revenue Requirements

The input section is described below. All other sections are calculations derived from the inputs. The general basis for these calculations has been described in the preceding sections of this appendix.

Franchise specific data[5]

We propose that certain franchise area specific information may be applied together with national norm information to help assure that the benchmark rates fit individual communities.[6] The local information required is straight-forward, and should not impose undue reporting burdens on franchise authorities or cable operators. The minimum local data requirements include: (1) number of subscribers; (2) plant miles; and (3) the number of channels

[4] In the illustration of the model that appears in this section particular figures are included as "industry norms." We do not intend that these figures to represent actual norms, but include them merely to clarify the model presentation. Under our proposal, the Commission would become responsible for data collection and analysis to develop the actual norms.

[5] We propose these data as "franchise specific" for the purpose of initial Commission data collection and analysis. The results of the initial analysis may indicate that many of these inputs may be treated as norms in the future, in order to simplify administration of the model.

[6] The data should be specific to each franchise area. Many local cable systems contain multiple franchise areas, and therefore should report separately for each area. Certain data (for example, channel capacity) may be the same for each franchise area within a particular system

EXHIBIT A-4: CABLE TV RATE BENCHMARK MODEL

	A	B	C	D	E
1					
2	**I. MODEL INPUTS**				
3					
4	**Franchise Specific Data**			**Industry Norms**	
5					
6	*Franchise area statistics*			The figures used below are included only to illustrate how the	
7	Homes passed	100,000		cost-of-service model works. They are not intended to represent	
8	Aerial plant miles	700		actual norms. The determination of actual norms will result	
9	Underground plant miles	300		from FCC data collection and analysis.	
10	Number of subscribers	54,000			
11	Number of basic only subscribers	2,700		**Capital cost drivers**	
12	Number of expanded basic subscribers	51,300		Aerial plant cost per mile	$17,000
13	Number of pay customers*	27,000		Underground plant cost per mile	$60,000
14	Number of converters in use	37,800		Headend, towers, antenna, hubs	$1,000,000
15	Number of remotes in use	27,000		Other	$1,500,000
16	Number of annual installs - new	8,100			
17	Number of annual installs - reconnect	8,100		**Operating cost drivers**	
18	Number of additional outlet installs	8,100		Programming	
19				Basic programming per basic subscriber***	$5.00
20	*PEG support (annualized)*	$200,000		Exp. basic program. per exp. basic sub.***	$40.00
21				Pay/PPV program. per basic subscriber****	$48.00
22				Fixed programming expense	$50,000
23	*Franchise area operating cost drivers*			Technical/plant	
24	Franchise fee percent	5.0%		Technical cost per mile	$1,000
25	Copyright fee percent - basic	1.0%		Technical cost per subscriber	$10.00
26	Copyright fee percent - exp. basic	2.5%		Fixed technical expense	$200,000
27	Other state/local taxes percent of rev.	2.0%		Marketing	
28	Retransmission expense - basic	$50,000		Marketing cost per subscriber	$10.00
29				Fixed marketing expense	$100,000
30	Other regulated rates			General and administrative	
31	Installation charge - new	$50.00		G&A cost per subscriber	$30.00
32	Installation charge - reconnect	$15.00		Bad debt percent of revenue	1.5%
33	Additional outlet install charge	$15.00		Other G&A percent of revenue	3.0%
34	*Coverter charge per month*	$3.00		Fixed G&A expense	$1,000,000
35	Remote control charge per month	$1.00			
36					
37	**Other revenue (tiers in parentheses)**			**Allowable return on capital**	12.0%
38	Advertising (exp. basic)**	$648,000			
39	Home shopping (exp. basic)**	$324,000		Install and equip. expenses per sub	$17.00
40	Other (basic)**	$324,000			
41				* Pay customers is the number with at least one pay service	
42	**Channels**			** Tiers assigned based on local alignment	
43	Basic	17		*** Programming expense based on national norms for specific services, aggregated for actual channel line-up of the system	
44	Expanded basic	27			
45	Pay and pay per view	10		**** Pay/PPV revenue not needed for basic calculations; total pay/PPV revenue divided by the number of basic/expanded basic subscribers	
46					
47	Total	54			
48					
49	Shaded variables represent the minimum set of local data			Boxed inputs not required for basic or expanded basic	
50	required. Other local variables could be determined as				
51	national norms instead.				
52					
53	**II. ALLOCATION FACTORS (calculated from model inputs)**				
54					
55	**Channel allocation percentages**			**Subscriber allocation percentages**	
56	Basic	31.48%		Basic services*	3.33%
57	Expanded basic	50.00%		Expanded basic services**	63.33%
58	Pay and pay per view	18.52%		Pay services***	33.33%
59					
60	**Revenue variable expense**			* Number of basic only divided by sum of basic only, expanded basic, and pay customers	
61	Basic	12.50%		** Number of expanded basic divided by sum of basic only, expanded basic, and pay customers	
62	Expanded basic	14.00%		*** Number of pay customers divided by sum of basic only, expanded basic, and pay customers	
63	Pay and pay per view	11.50%			
64	Other revenue	11.50%			
65					
66					

EXHIBIT A-4: CABLE TV RATE BENCHMARK MODEL

	A	B	C	D	E
68	III. JOINT AND COMMON COST POOL (calculated from model inputs)				
69					
70	Construction cost			Per channel operating expenses*	
71	Headend, towers, antennas,hubs	$1,000,000		Programming	$0
72	Aerial plant	$11,900,000		Technical	$1,000,000
73	Underground plant	$18,000,000		Marketing	$0
74	Other	$1,500,000		General and administrative	$0
75					
76				Total*	$1,000,000
77	Total	$32,400,000			
78				Per subscriber expenses**	
79				Programming	$50,000
80	Return on capital	$3,888,000		Technical	$740,000
81				Marketing	$640,000
82	Capital replacement	$1,620,000		General and administrative	$2,820,000
83				PEG support	$200,000
84					
85					$4,250,000
86					
87					
88	* Includes variable per mile ; excludes fixed, per			**Excludes per channel expenses, direct programming	
89	subscriber expenses and expenses driven by revenue			expenses, and expenses driven by revenue; includes	
90				fixed expenses	
91	IV. TIER ALLOCATIONS*				
92					
93	Basic allocations			Pay and pay per view allocations	
94	Annual operating per channel	$314,815		Annual operating per channel	$185,185
95	Annual operating per sub	$141,667		Annual operating per sub	$1,416,667
96	Return on capital**	$1,224,000		Return on capital**	$720,000
97	Replacement capital**	$510,000		Replacement capital**	$300,000
98					
99	Allocated revenue requirement*	$2,190,481		Allocated revenue requirement*	$2,621,852
100					
101					
102	Expanded basic allocations				
103	Annual operating per channel	$500,000		* Excludes direct programming expense and	
104	Annual operating per sub	$2,691,667		revenue variable expense	
105	Return on capital**	$1,944,000			
106	Replacement capital**	$810,000		** Allocated on per channel basis	
107					
108	Allocated revenue requirement*	$5,945,667			
109					
110					
111	V. REVENUE REQUIREMENTS				
112					
113	Basic			Pay and pay per view	
114	Allocated revenue requirement	$2,190,481		Allocated revenue requirement	$2,621,852
115	Direct programming expenses	$320,000		Direct programming expenses	$2,592,000
116	Less other revenue	($324,000)			
117					
118	Subtotal	$2,186,481		Subtotal	$5,213,852
119					
120	Revenue variable expense	$312,354		Revenue variable expense	$677,506
121					
122	Total revenue requirement	$2,498,836		Total revenue requirement	$5,891,358
123					
124	Rate ceiling	$3.86		Required revenue per subscriber	$9.09
125					
126	Expanded basic			Consolidated	
127	Allocated revenue requirement	$5,945,667		Allocated revenue requirement	$10,758,000
128	Direct programming expenses	$2,052,000		Direct programming expenses	$4,964,000
129	Less other revenue	($972,000)		Less other revenue	($1,296,000)
130					
131	Subtotal	$7,025,667		Subtotal	$14,426,000
132				Plus other revenue (installs, equip., and other)	$3,628,800
133	Revenue variable expense	$1,143,713		Revenue variable expense	$2,133,574
134					
135	Total revenue requirement	$8,169,380		Total revenue requirement	$20,188,374
136					
137					
138	Expanded component rate ceiling	$13.27		Required revenue per subscriber	$31.15
139					
140	Combined expanded basic rate ceiling	$17.13		Total revenue check	$20,188,374

and satellite services on each tier. However, we recommend additional variables for the Commission's initial analysis, and they are therefore included here. The recommended inputs (column and line identifiers in parentheses) are described below.

Franchise area statistics

The primary statistics necessary to run the model include:

- Homes passed (B7). This figure is not applied in subsequent allocations, but may be appropriate to help determine which set of norms to apply, if the data analysis suggests norms should be based on market size.

- Aerial plant miles (B8). This figure should be ascertainable by franchise area within each cable system.

- Underground plant miles (B9). Underground miles are segregated from aerial because the construction cost may vary significantly; the aerial underground breakdown allows the model to be more sensitive to local characteristics. This figure should be ascertainable by franchise area within each cable system.

- Number of subscribers (B10); the total number of subscribers in the area. This figure should be readily available by franchise area from subscriber billing systems.

- Number of basic only subscribers (B11); the number taking only the lowest basic tier from among the basic options.[7] This figure should be readily available by franchise area from subscriber billing systems.

- Number of expanded basic subscribers (B12); the number taking any level of basic service above the lowest basic tier. This figure should equal B10 minus B11. It should be readily available by franchise area from subscriber billing systems.

- Number of pay customers (B13). This is the number taking at least one pay service. It should be readily available by franchise area from subscriber billing systems. It is applied to allocate certain joint and common costs.

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[7] Some low basic only subscribers may also take pay service, and these should be counted in this figure. Those who also take any higher level of basic service should be excluded.

Counts driving installation and subscriber revenue are not necessary to determine basic or expanded basic rates, but they help drive estimates of installation and equipment revenue and therefore contribute to a consolidated revenue and expense analysis. These figures should be available by franchise area from subscriber billing systems. The counts include:

- The number of converters for which subscribers pay a monthly charge (B14).

- The number of remote control units in use for which subscribers pay a monthly fee (B15). Depending on local practices, it should be a subset of the number of converters (that is, some of the converters in the system will have remotes and some will not; B14 is to count all converters; B15 is to count only the ones with remotes).

- Total number of installations during the year to households which were connected for the first time and for which an installation charge was assessed (B15).

- Total number of installations during the year to households which were reconnected (a drop a previously been placed to the household unit) and for which an installation charge was assessed (B16).

- Total number of additional outlets installed during the year for which a subscriber charge was assessed (B17).

PEG support (annualized)

The model provides for public, educational, and government access (PEG) costs. Line B20 includes an annual amortization of any capital grants, studios, equipment, or other capital items required under the franchise (allocated if they serve more than one franchise area). The figure can be treated as a norm, but if it is localized it should be reviewed by the local franchise authority for accuracy.

Franchise area operating cost drivers

The following factors that drive operating costs may vary by franchise jurisdiction; depending on the extent of the variation, the model will allow them to be applied either on a franchise specific basis, or as norms:

- The franchise fee percentage of total revenue (B24)

- The copyright fee percentages that apply to basic tier (B25) and expanded basic tier (B26) revenue, based on the distant signals carried on the respective tier.

- Any other state or local taxes that apply as a percent of revenue (B27). In some jurisdictions there may be utility, amusement, or other use taxes in addition to franchise fees.

- The expense paid for retransmission consent of local broadcast signals, if any (B28).

Other regulated rates

These rates are the one time charges paid for installation (B31, B32, and B33) and the monthly charges for equipment (B34 and B35). They will be determined separately from the basic and expanded basic rate-making, based on rules the Commission will establish. These rates are not required to determine basic or expanded basic rates, but are applied in the model as one of the drivers of installation and equipment revenue to generate a consolidated operating statement. The figures should be available by franchise area from subscriber billing systems.

Other revenue

The Act provides that advertising revenue and other consideration received by the operator for basic and expanded basic services be taken into account in setting rates. The model assigns this revenue to the tier(s) on which the revenues are generated. The example assumes that all advertising (B38) and home shopping services (B39) appear on the expanded basic tier, and that other revenue (B40) is attributable to only basic subscribers (thus it is assigned to the lowest tier). The revenue could be assigned differently than in the example, depending on the results of the Commission's study.

Channels

The number of channels on each tier (B43, B44, and B45) are applied by the model as an important factor for allocating joint and common costs. Only active channels, containing at least a minimum number of hours of daily programming, should be counted in the basic tiers. Any channels used for pay or pay-per-view should be counted, regardless of the daily hours of programming.

Appendix A

Industry norms[8]

Industry norms are applied as the cost drivers for many of the factors in the model. The purpose of using norms is to simplify the administration of the model, so that detailed cost finding will not be required for every community, and to help assure that the cost basis for rates is reasonable and prudent. Norms, in contrast to allowance of actual costs, provide incentives for cost efficiency. However, just as norms could be applied for many variables in the franchise specific section, actual local costs could also be applied in this section. The appropriate result depends on data analysis and policy decisions beyond the scope of this report.

The norms will be developed based on Commission analyses of cost data collected from cable systems. The data will be collected on a system basis because many local systems include more than one franchise area, and the required accounting information may not be readily available on a franchise specific basis. The variable norms will then be automatically adjusted to the franchise areas being analyzed, because certain model cost drivers will use the specific subscriber counts, plant miles, and channel allocations of the franchise area. The fixed costs will be tailored to the franchise area by matching the appropriate category of norms to the franchise area characteristics.

Thus there may be more than one set of norms, particularly for capital expenditure items and fixed operating costs, based on system or area characteristics. For example, capital costs may be classified according to system technical characteristics (megahertz capacity), and "fixed" operating expenses may be based on step functions of broad subscriber size categories (for example 0 - 5,000; 5,001 - 20,000; 20,001 - 100,000; etc.). The appropriate category norms would then be applied to each local franchise. The number of different categories will depend on the results of the Commission's data analysis, but should be kept limited to maintain the administrative simplicity of the model.

An explanation of each norm line item appears below.

Capital cost drivers

Normative capital costs are determined on a current replacement cost basis, in order to simulate an operator currently entering the market. Equipment and capitalized installation costs are excluded, because the rates for these items are determined separately. The respective

[8] We suggest the variables shown here for the purpose of the Commission's initial data collection and analysis. The results of the initial analysis may indicate that fewer variables can be applied in the future.

norms will be determined through the annual Commission sample survey, and it could be augmented by special engineering analyses the Commission may conduct. Each capital expenditure line is explained below.

- The aerial plant cost per mile (E12) includes all labor, materials and make ready expenditure necessary to build an average plant mile of cable for a system in the same category as the particular franchise area under analysis.

- The underground plant cost per mile (E13) includes all labor and materials expenditure necessary to build an average plant mile of cable for a system in the same category as the particular franchise area under analysis.

- The headend, towers, antenna, and hubs expenditure (E14) is the amount necessary to cover these items for a system in the same category as the particular franchise area under analysis.

- The "other" capital expenditure (E15) may include land, buildings, vehicles, equipment, or prematurity intangibles (excluding franchise value). The appropriate figure will be a norm for systems in the same category as the particular franchise area under analysis. The Commission should assure that acquisition costs are not double counted with any lease or rental costs that may be included in operating expense norms.

- The annual replacement percent (B16) is to be applied to the capital investment base. It is an amount to maintain the system.

Operating cost drivers

These figures will be derived from actual accounting records for systems included in the Commission's cost survey. The survey form will provide specific instructions to the cable operator on how to classify the requested data. The Commission will then analyze the responses to determine the norms. The "fixed" cost norms will be determined as residuals of the variable costs.

The model classifies programming costs as follows:

- Basic programming acquisition cost per basic subscriber (E19) is the cost to acquire programming carried on the basic tier, exclusive of PEG or local origination programming required by the franchise (B20), retransmitted local broadcast signals (B28), and revenue variable costs (copyright fees, for example).

- Expanded basic programming per expanded basic subscriber (E20) is the cost to acquire programming carried on the expanded basic tier, not counting the cost of that carried on the low basic tier.

- The pay and pay-per-view programming cost per basic subscriber (E21) is not necessary to determine basic and expanded basic revenue requirements, but the model applies it in a calculation of total revenue in a consolidated statement of operations. The norm can be determined through survey responses, dividing the total pay and pay-per-view programming cost for each survey system by the number of basic subscribers in that system.

- Fixed programming expense is the residual amount in the programming category after the variable programming expenses (E19, E20, and E21) and local specific programming expenses (B20 and B28) have been determined.

Technical and plant expenses are classified as follows:

- Technical costs per mile (E24) include the salaries and benefits of plant technicians (but not house technicians or installers), system power, pole attachment or conduit rental fees, plant vehicle expenses and property taxes on plant.

- Technical costs per subscriber (E25) include non-capitalized salaries and benefits of house technicians and installers (excluding capitalized amounts assigned to connections), where these costs are not directly assignable to equipment maintenance (such as converter maintenance).

- The fixed technical expenses (E26) include the remaining technical expenses, such as technical management personnel salaries and benefits, excluding the capitalized costs and costs otherwise directly or indirectly assigned to installations and equipment.

The marketing costs include:

- Marketing expenses that are assumed to vary with the subscriber size of the system (E28). These include advertising expenses, sales commissions, and the salaries and benefits of direct sales personnel.

- All other marketing expenses are considered fixed (E29). Generally these will include the salaries and benefits of any marketing administration personnel.

General and administrative expenses are classified into several sub-categories:

- General and administrative expenses that are assumed to vary per subscriber (E31) include the following:
  - Salaries and benefits of customer service representatives and their immediate supervisors
  - Data processing expenses
  - Postage
  - Telephone
  - Stationery and office supplies
- Bad debt expense is treated as a percentage of total revenue (E32).
- Fixed general and administrative expense (E34) includes all other general and administrative expenses not counted elsewhere, exclusive of any extraordinary items. General management salaries and benefits (exclusive of customer service representatives and their immediate supervisors) fit in this category.

Allowable return on capital

The Commission will perform analyses to determine a norm for the allowable return on capital (E37). The average debt-to-equity mix in cable system acquisitions or construction may be used as a guide to the capital structure. Current interest rate averages for cable debt financings may be used as a guide for the cost of the debt component. The cost of capital should be a weighted average of the cost of debt and the cost of equity, determined by an appropriate method.

Installation and equipment expenses

Installation and equipment expenses are not part of the revenue requirement for basic and expanded basic rates, because installation and equipment charges are to be determined separately. A per subscriber amount is included here (E39) only so that a consolidated statement of expenses may be produced by the model. These expenses may include non-capitalized salaries and benefits of installers and house or bench technicians where such costs are directly assignable to installation or equipment activities. Converter maintenance expenses

should be included. Warehouse and dispatch expenditures may also be directly assignable to this category. A portion of technical overhead may be allocated, based on direct labor expenses or another reasonable basis. Expense items should not be double counted between this and other expense categories.

Appendix B

REPORT TO THE FEDERAL COMMUNICATIONS COMMISSION IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING TO IMPLEMENT RATE REGULATION SECTIONS OF THE CABLE TELEVISION CONSUMER PROTECTION AND COMPETITION ACT OF 1992

(FCC 92-544; MM Docket 92-266)

APPENDIX B: EVIDENCE OF THE MONOPOLY COMPONENT IN CABLE PRICES

January 27, 1993

Submitted by:

Mr. Jay C. Smith
Public Knowledge, Inc.
Portland, Oregon

Mr. Michael Katz
KFA Services
Edmonds, Washington

Appendix B

EVIDENCE OF THE MONOPOLY COMPONENT IN CABLE PRICES

1. Introduction

A principal objective of the Cable Television Consumer Protection and Competition Act of 1992 is to protect subscribers in areas with no effective competition from paying rates higher than those that would be charged if the system were subject to effective competition. Therefore, we believe that it would be useful for the Federal Communications Commission (Commission) to review evidence of the size of the monopoly component in basic and expanded basic rates prior to establishing its rules for rate regulation, in order to consider whether the various methods of rate regulation are likely to remove the monopoly component.

We present this brief overview of some of the evidence of the relative size of the monopoly to suggest how the Commission might further assess this issue before adopting its rate regulation rules to implement the Act. This evidence includes:

- Differences in pay and basic rate changes
- Cable system sales price trends
- "Franchise value" intangible assets
- Econometric studies
- Comparative rates in competitive or municipal systems
- Cost-of-service model results

Each type of evidence is briefly discussed below.

2. Differences in Pay and Basic Rate Changes

There have been several studies of the trends in cable television basic and expanded basic services rates over the past several years.[1] It is informative, however, to also consider trends

[1] For example, United States General Accounting Office, "1991 Survey of Cable Television Rates and Services," July 1991; GAO/RCED-91-195.

in pay services rates. Each pay service to some degree competes for subscriber dollars with other similar pay services (HBO and Showtime offer similar services, for example). Videocassette movies are also a possible substitute for pay services. Therefore, there may be some competitive pressure on pay rates from substitute products.

The graph appearing in Exhibit B-1 shows pay services rate trends in relation to trends in basic rates, and basic plus expanded basic rates, between 1984 and 1991. The figures are indexed to a base year of 1984, when the Cable Communications Policy Act was passed, deregulating rates in most jurisdictions (effective in January 1987). As the graph shows, the price of basic plus expanded basic nearly doubled in this time period, with pay rates remaining relatively constant.

The possible reasons for the difference between the trends for pay versus basic/expanded basic services include:

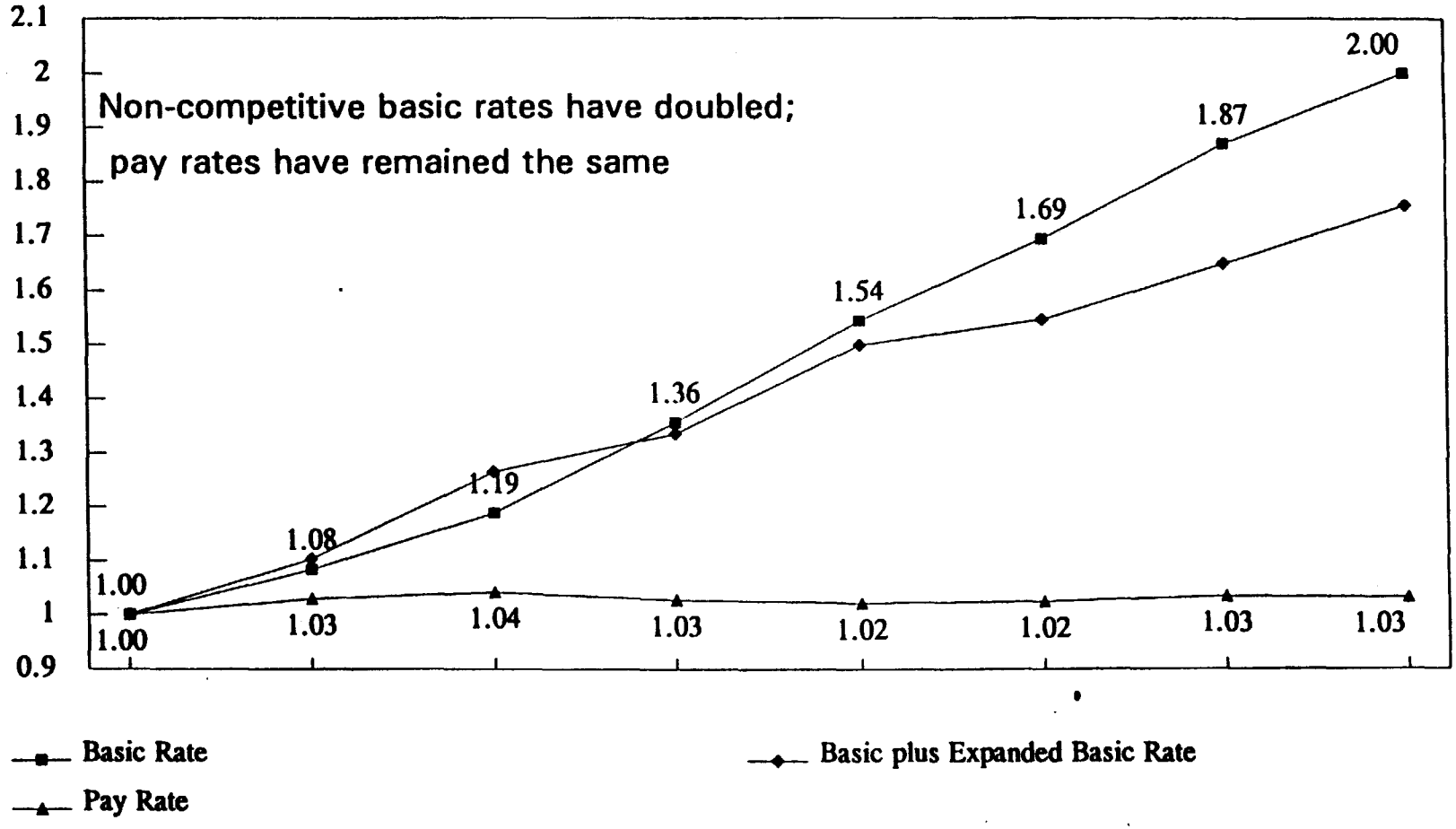
- Differences in programming cost increases
- Differences in other cost increases
- Differences in the competitive situation of the respective services

The costs of obtaining programming differ between pay and the basic/expanded basic tiers, but the different services share the same joint and common costs. While possible differences in program acquisition cost changes between pay and basic/expanded basic services may explain some of the difference in rate trends, it is unlikely that such a large variation can be explained by programming costs -- programming costs for basic plus expanded basic typically represent no more than 10% to 20% of the related revenues. And since the joint and common cost pool is the same, changes in these costs also cannot explain the differences in trends. Therefore, it appears that the non-competitive nature of basic/expanded services, versus the more competitive environment of pay services, seems to explain much of the difference.

If a competition standard were used as the basis for indexing allowable rate adjustments, and changes in pay rates were used as the data points for what could be expected in a competitive environment, then basic/expanded basic rates would be held to approximately what they were in 1984.

Exhibit B-1

INDEXED CHANGE IN CABLE TV RATES



Data source: "The Cable TV Financial Databook," Paul Kagan Associates, Inc., 1984-1992

Appendix B

3. Cable System Sales Price Trends

Exhibit B-2 illustrates that sales prices for cable systems, when expressed on a per subscriber basis, have nearly doubled since 1984. The reasons this value may have changed include:

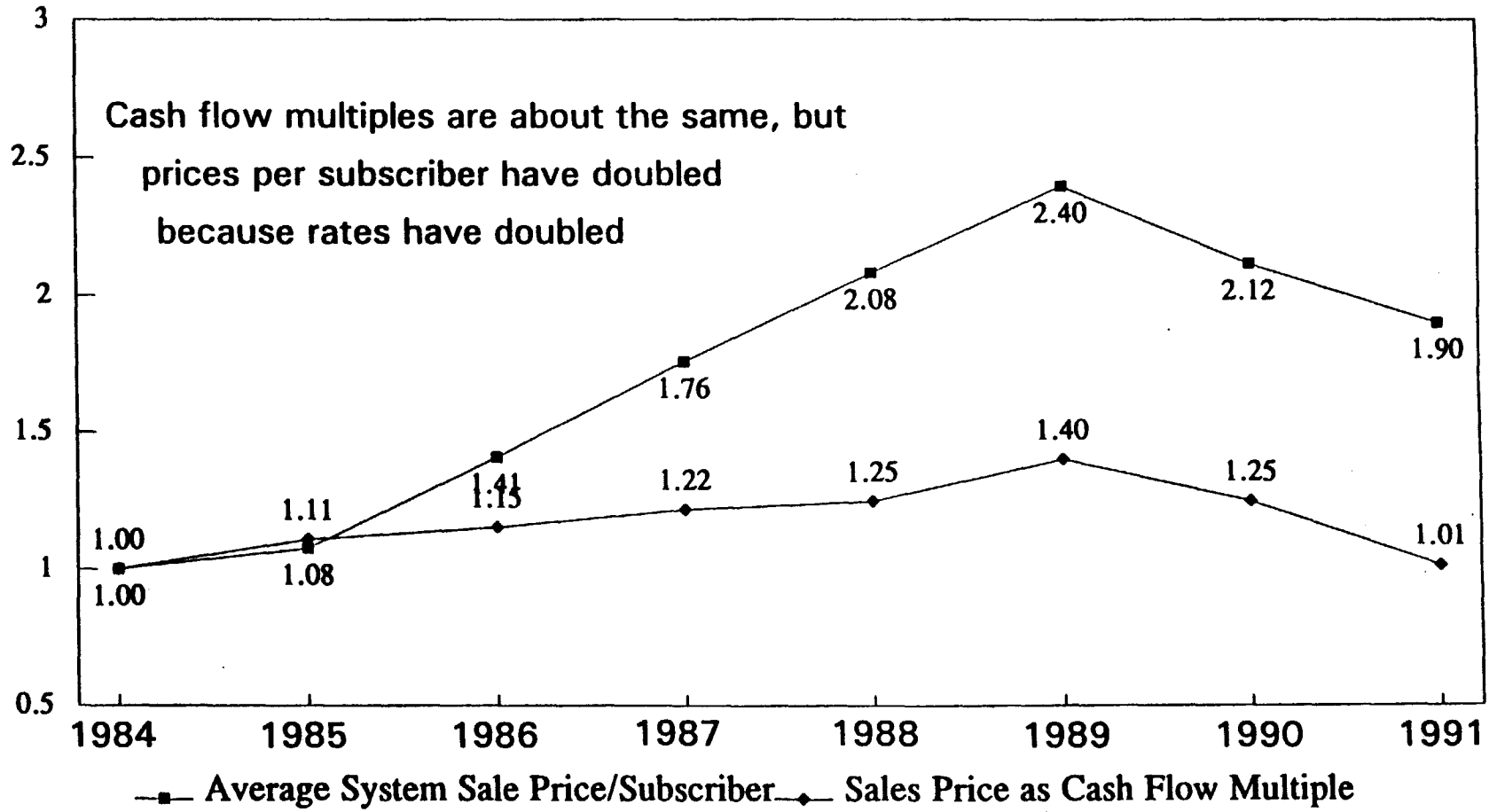
- Changes in the cost of capital and/or expected future growth rates

- Additions of revenue sources
- Increases in rates exceeding increases in cost per subscriber

Changes in the cost of capital, in combination with expected future growth rates, would be reflected in the cash flow multiples paid for acquired systems. Since the average multiple was the same in 1991 as it was in 1984, this factor cannot explain the per subscriber value change.

Exhibit B-2

INDEXED CHANGE IN CABLE SYSTEM SALES VALUES



Data source: "The Cable TV Financial Databook," Paul Kagan Associates, Inc., 1984-1992

Some of the increase in values is likely explained by additions of revenue sources. Non-subscriber revenues, such as advertising and home shopping, increased during the 1984 to 1991 period, and as system channel capacity increased more programming services could be carried. However, these factors do not appear to be sufficient to explain the magnitude of the increase in sales values.

That leaves actual rate increases, in excess of any cost per subscriber increases, as the most significant explanatory factor for the majority of the increase. Rate increases exceeding subscriber cost increases mean higher cash flows, thus increasing what a buyer will pay for a system. The data seem to support a hypothesis that one notable effect of rate de-regulation was to increase the price buyers were willing to pay to acquire cable systems because they expected and were able to achieve higher rates (and therefore higher cash flows) than they did when most local franchise authorities could regulate basic rates.

4. "Franchise Value" Intangible Assets

The expectations a buyer may have for supernormal profits attributable to rates above those necessary to provide a normal cost of capital are captured as intangible "franchise value" when a system is sold.[2] Intangible assets result from accounting transactions to reconcile the cost of a system acquisition with the current tangible value of that system. Typically the tangible assets are valued at current market prices or depreciated replacement costs, and the difference between the purchase price and the tangible asset values are assigned to intangibles. Most of the intangible value in a cable system following a sale is represented by the "franchise value."

In fact, intangible assets are now a much higher proportion of cable company assets than they were in 1984, as shown on a company-wide basis for certain multiple system operators in Exhibit B-3. Most of this increase is likely attributable to the "franchise value" associated with acquisitions of cable systems.[3]

The difference in the sales value of cable systems and the replacement value of the tangible assets can be used to generate a measure of the monopoly power of the industry. This measure, Tobin's q, has been addressed in several submissions in previous Commission proceedings, so

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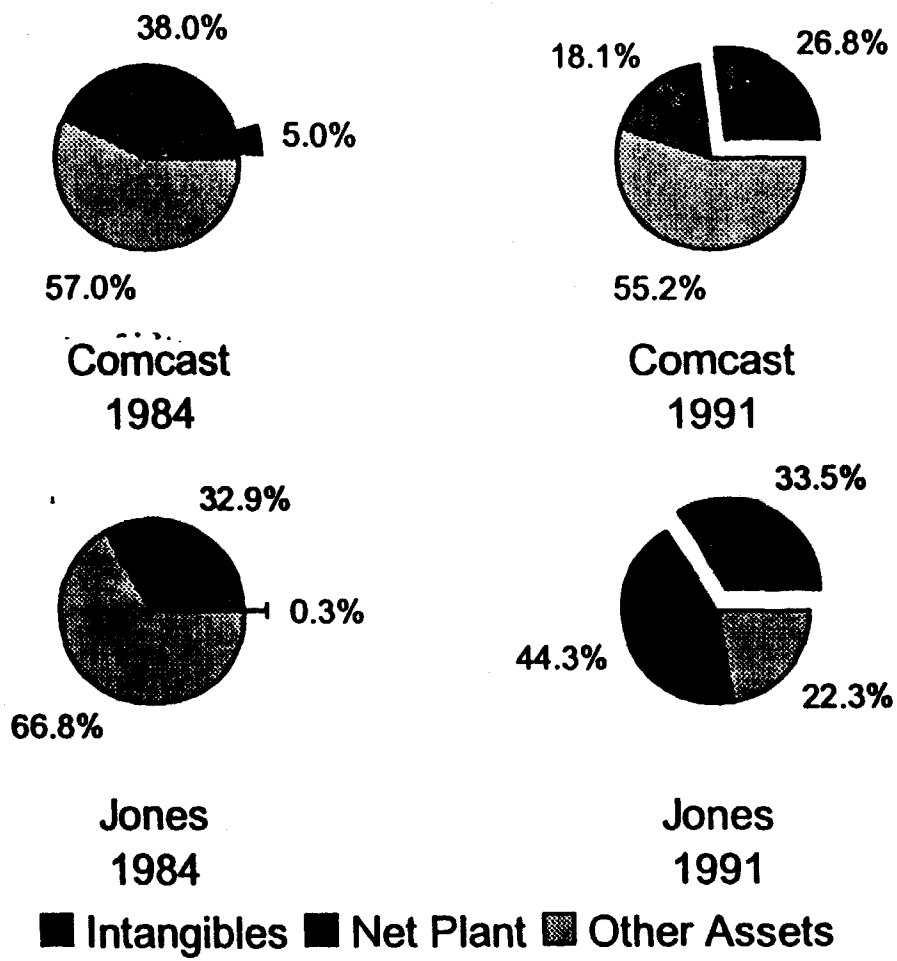
[2] An extensive discussion of "franchise value" in the cable television industry appears in the record of United States Tax Court, Docket No. 268-89 (Filed November 7, 1990). Tele-Communications, Inc. and Subsidiaries v. Commissioner of Internal Revenue. 95 T.C. No. 36.

[3] Although other local cable system intangibles and intangibles from other lines of business likely compose some of the intangible component as well.

Exhibit B-3 (Page 1 of 2)

INTANGIBLES ARE NOW A MUCH HIGHER PROPORTION OF CABLE COMPANY ASSETS



Data source: "The Cable TV Financial Databook," Paul Kagan Associates, Inc., June 1992